



Dryden Flight Research Center
Edwards, California 93523

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Revision F, with changes March 29, 2006

Dryden Centerwide Procedure

Code S

Aircraft Mishap Response Procedure **with changes March 29, 2006**

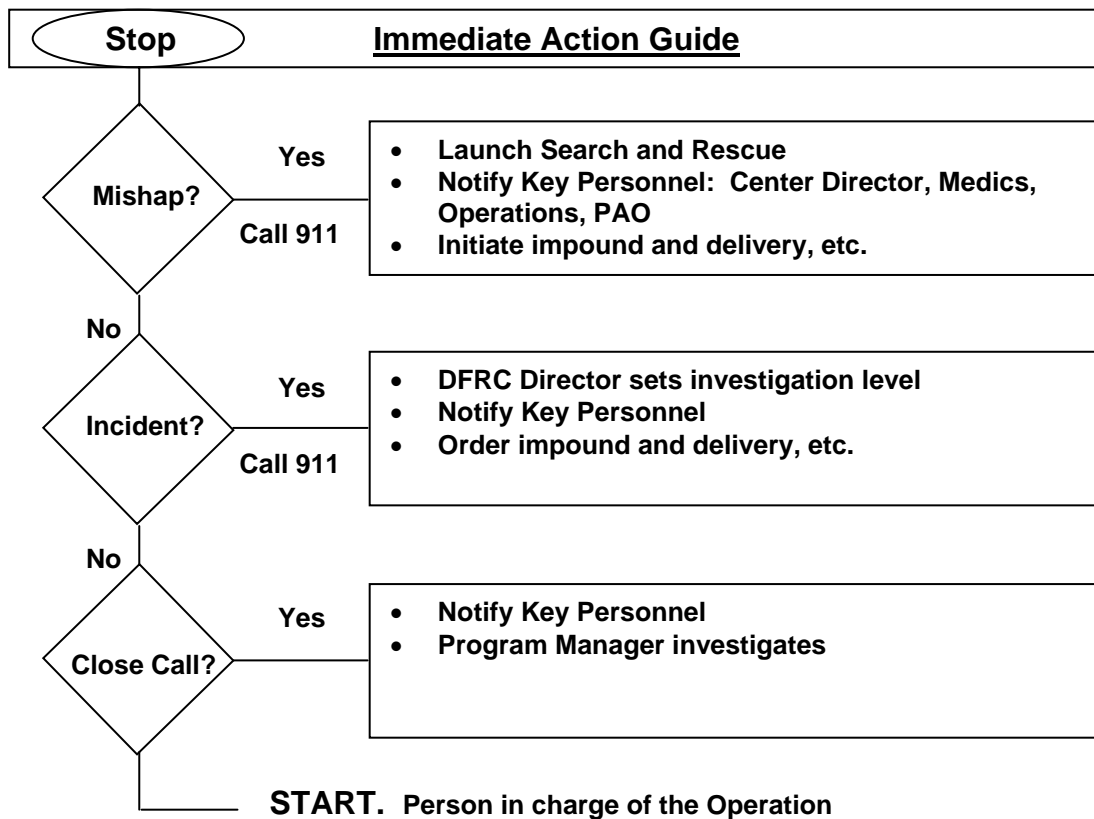
Electronically approved by
Assistant Director for Management Systems

Before use, check the Master List to verify that this is the current version.

Aircraft Mishap Immediate Action Guide

In the event of an Aircraft Mishap, call

911



Aircraft Mishap Immediate Response Guide

If a mishap occurs:	1. After normal work hours, refer to Tab Q 2. Off Site deployment, refer to Tab R 3. Otherwise proceed as below	
DFRC Director	1. Convene initial meeting in your office 2. Evaluate severity/impact of mishap 3. Appoint interim investigation board 4. Participate in next of kin notification, as appropriate 5. Direct appropriate reports to be made outside DFRC	Tab A Tab B Tab C Tab D Tab I
Flight Operations Director	1. Notify AFFTC Command Post (Phone number 661-277-3040) 2. Activate Flight Ops Action Plan	Tab G
Office of Safety & Mission Assurance	1. Preserve aircraft and control room data 2. Activate Flight Safety and Mission Assurance Office Plan 3. Participate in initial meeting in Director's Office	Tab H
Security	1. During working hours, notify key personnel 2. After working hours 3. For further action, refer to	Tab E Tab F/Q Tab J
Deployment Site Manager	1. For further action, refer to	Tab R
Deployment Controller/Monitor	1. For further action, refer to	Tab R
Medical Officer	1. Collect essential information 2. Initiate medical Action Plan	Tab F Tab M
Public Affairs Office	1. Participate in initial meeting in Director's Office 2. Activate Public Affairs Action Plan	Tab P
Controller/Senior Ops Rep.	1. Activate Controller Action Plan 2. Notify key personnel	Tab L Tab E
On Scene Commander	1. Assume overall command and coordination activities at mishap Site following hand off from initial on scene Commander. 2. Refer to On-Scene Commander guide	Tab K
Personnel Officer/EAP Rep.	1. Provide information to the DFRC Director to facilitate notification of next of kin. 2. Implement Personnel Officer Action Plan	Tab D
Chief Counsel	1. Ascertain legal aspects of mishap and advise the Director 2. Coordinate with legal representatives of outside agencies	

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DFRC Aircraft Mishap Plan

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How To Use This Plan

Immediate actions: CALL 911

The Immediate Action Guide refers to the specific **Tabs** of the Plan. The tabs contain detailed actions to be taken following a mishap. Response in the actual event of an aircraft mishap will be improved by reading applicable tabs before the mishap occurs.

All personnel who have actions defined in this plan should retain a copy and keep it updated. A pencil is recommended for listing telephone numbers and name changes. Each Directorate Office will submit changes to names and telephone numbers as required to the Safety and Mission Assurance Office.

References supplement this guide.

References

1. NASA Safety Manual, NPR 8715
2. Mishap Reporting and Investigation Policy, NPD 8621.1 G
3. Requirements for Mishap Investigation, NPR 8621.

Report Forms

Aircraft mishaps are reported on NASA form 1627A. The latest revision of this form is available from the DFRC Office of Safety and Mission Assurance located in Bldg. 4800, room 2128, phone (661) 276-2500 (Internal DFRC ext. 2500)

DFRC Aircraft Mishap Plan

Initial Meeting – Objective

A

Tab A Initial Meeting – Objective

- 1 Immediately after an aircraft mishap, a meeting in the Directors office will take place and is limited to the following individuals:
 - Director/Acting Director
 - Deputy Director
 - Chief Engineer
 - Flight Operations Directorate Representative
 - Safety and Mission Assurance Office Representative
 - Public Affairs Office Representative
 - Senior Ops Rep in the Control Room

- 2 The objectives of this meeting will be to:
 - A. Ensure adequate crash and medical response.
 - B. Ensure all aircraft and flight data is being collected.
 - C. Assign a NASA team to go to the crash site. Team will consist of NASA on-Scene Commander, aircraft crew chief, security guard, and a photographer.
 - D. Designate individuals to contact family members (time of notification TBD) and the following individuals or offices in the following order:
 1. AA for Code R or Code J as needed
 2. HQ Code Q Safety
 3. NASA Headquarters AMO
 4. HQ Code R Program Manager
 - E. Approve/Issue a PAO news release.
 - F. Ensure all required personnel are notified (**Tab E**)

- 3 Approximately one hour after the initial meeting, a second meeting will take place in the Executive Conference Room and will include all Directorate Chiefs and the seven individuals listed in item 1.

The objectives of this meeting are:

 - Designate an interim investigation board chair and interim members
 - Arrange for continuous security coverage of the accident site
 - Task Research Facilities and Operations to gather all pertinent data and support any investigative analysis as required
 - Ensure everything possible is being done to prevent further injury or damage and that ongoing medical, rescue and damage control actions are proceeding with maximum needed response
 - Ensure known facts are clearly understood by all participants
 - Ensure premature assessment of cause is avoided
 - Ensure public statements are not made by other than Dryden Public Affairs Officers
 - Resources previously uncommitted but required to address the mishap are identified and committed.

- 4 The DFRC Director, accompanied by the Medical Officer and a representative from the Flight Operations Directorate, will notify the next-of-kin of Dryden personnel, if appropriate.

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Tab A Initial Meeting – Objective (Continued)

- 5 Only the DFRC Public Affairs Officer will release information to the public. The PAO will coordinate with other NASA Centers, NASA Headquarters, and AFFTC as appropriate. Public identification of casualties will not be made until permission is granted by the Director (after assurance is received that next-of-kin have been notified).
- 6 Mishap notification to NASA Headquarters Safety Division will be made by the Safety and Mission Assurance Office. The latest NASA Headquarters Mishap Notification List (maintained in the Dryden Safety and Mission Assurance Office) will serve as a ready reference in complying with NASA Safety Manual procedures.

NOTE: A list of current work and home phone numbers of all Key Dryden personnel will be maintained by the Center Director's secretary.

DFRC Aircraft Mishap Plan

Mishap Severity – Investigation **B**

Tab B Mishap Severity – Investigation Requirements

Mishap	Severity	Investigation Requirements
Type A Mishap	A mishap causing death and/or damage to equipment or property equal to or greater than \$1,000,000.	Investigated by a board appointed by the appropriate Program or Institutional Associate Administrator. Five federal officials required on board.
Type B Mishap	A mishap resulting in permanent disability to one or more persons, hospitalization (within a 30-day period from the same mishap) of three or more persons, and/or damage to equipment or property equal to or greater than \$250,000 but less than \$1,000,000.	Investigated by a board appointed by the Field Installation Director, unless circumstances dictate a Headquarters directed investigation. At least three federal officials required on board.
Type C Mishap	A mishap resulting in damage to equipment or property equal to or greater than \$25,000 but less than \$250,000 or and/or causing occupational injury or illness that results in a lost work day case.	Analyzed locally by committees or individuals unless circumstances dictate a more formal investigation
Incident	A mishap consisting of personal Injury of less than Type C Mishap Severity but more than first-aid Severity, and/or property damage equal to or greater than \$1,000, but less than \$25,000.	Investigation procedures are the option of the DFRC Director.
Close Call	An occurrence in which there is no injury, no equipment/property damage equal to or greater than \$1,000, and no significant interruption of productive work, but which possesses a high severity potential for any of the mishaps defined as Type A, B, C Mishap, or Incident	Investigation procedures are the option of the DFRC Director.

DFRC Aircraft Mishap Plan

Interim Investigation Board

C

Tab C Interim Investigation Board

All NASA mishaps will be investigated. The severity of the mishap will determine the degree of investigation. Minor personnel incidents or minor equipment damage may only require a supervisory investigation. Major mishaps will require an Interim Board of Investigation.

An Interim Board of Investigation and Chairman will be appointed for all type A and B mishaps. The Board will, for purposes of investigating and reporting, remain autonomous. All organizations will provide consultative and advisory services as requested. The Interim Board will be appointed by the DFRC Director.

Upon appointment, the board will assume investigative responsibility including exclusive control of the accident site. Preserve all data and obtain witness statements. Obtain further instructions, checklists, and mishap forms from the Flight Safety and Mission Assurance Office.

Interim Investigation Board Chair

Once an Interim Investigation Board has been appointed by the DFRC Director, the Chairman will

1. Ensure that all members of the board have been notified.
2. Immediately assume responsibility for the mishap investigation, mishap report preparation, and preservation of the wreckage.

Except in cases where the wreckage interferes directly with civil or military functions (i.e., major highways or runways), the wreckage will not be moved or disturbed. During this time, the board will plot the wreckage distribution and obtain a photographic record of the scene of the mishap.

Further Responsibilities

The Chairman will coordinate and direct the activities of the board in the following areas.

1. Operational Tasks/Personnel tasks
 - Preserve all perishable data.
 - Provide a room for Board meetings.
 - Collect and evaluate material evidence.
 - Gather operational data (weather, flight data, and aircraft maintenance records).
 - Submit applicable reports.
 - Interview witnesses.
 - Gather background information on crewmembers.
 - Ensure appropriate engineering analysis investigations are conducted.

Before use, check the Master List to verify that this is the current version.

DFRC Aircraft Mishap Plan

Action Plan – Personnel Officer	D
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Tab D Action Plan – Personnel Officer

1. Ensure notification of next-of-kin occurs following a mishap. Next-of-kin of DFRC aircrew members will be notified by the DFRC Director, the Chief Pilot, or the Flight Operations Director. In the event of serious injury or death, notification of next-of-kin will be by the DFRC Director or the Flight Operations Director and accompanied by the Chief of the Employee Assistance Program.
2. Ensure notification of the next of kin of other NASA employees in the event they are involved in the mishap. Ensure the DFRC Director is advised of the required next-of-kin notification and any desires for personal involvement are accommodated.
3. Ensure that the PAO is informed when the next of kin have been notified to facilitate release of pertinent information to the news media.

DFRC Aircraft Mishap Plan

Aircraft Mishap Notification

E

Tab E Aircraft Mishap Notification

Call 911 First

When informed of an aircraft mishap, contact the following personnel immediately.

Name	Telephone Work / Home	Date / Time Notified
DFRC Director	PHONE NUMBERS KEPT IN S&MA OFFICE. CONTACT ext. 2500	
Director of Flight Operations	KEPT IN THE DIRECTOR'S OFFICE.	
Chief, Aircraft Maintenance	KEPT IN THE DIRECTOR'S OFFICE.	
Director, Safety & Mission Assurance		
Chief, Public Affairs Office		
Chief, Security Office		
Personnel Officer		
Medical Officer		
Chief Counsel		
Directorate Heads		
Code F		
Code P		
Code R		
COTR, Support Service Contract		
OTHERS:		
Chief Pilot		
EAP		
Chief Engineer		
Environ/Health/Safety		
Paging	Dial '0' twice	

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DFRC Aircraft Mishap Plan

Aircraft Mishap – Essential Information

F

Tab F Aircraft Mishap – Essential Information**Obtain as much of the following information as possible.**

1	Person (s) reporting mishap_____	Telephone_____									
2	Time/Date of notification _____										
3	Time of mishap _____										
4	Aircraft involved/Tail number <i>(if known)</i> _____										
5	Location of mishap _____										
6	Condition of personnel involved/parachutes sighted _____										
7	Has medical aid been summoned?	Yes _____ No _____ Not required _____									
8	Has AFFTC command post been notified? _____										
9	Description of accident _____										
10	Damage to aircraft _____										
11	Property damage/injury to public _____										
12	Who else has been notified? _____										
13	Caller's address and present location _____										
14	Known witnesses	<table border="0"> <tr> <td>Name</td> <td>Telephone</td> <td>Location</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </table>	Name	Telephone	Location	_____	_____	_____	_____	_____	_____
Name	Telephone	Location									
_____	_____	_____									
_____	_____	_____									
15	Weather at the scene _____										
16	Is a suitable Helicopter landing site nearby?_____ Nearest airfield _____										
17	Have the following been notified?_____ State/Local police _____										
	Fire Department _____										

Will the caller remain at present location or at another location to direct rescue and fire equipment?_____

Specify location _____

Ask caller to preserve wreckage until military or civilian authorities arrive.
CAUTION CALLER CONCERNING DANGERS OF EJECTION SEAT, CANOPY
JETTISON MECHANISM AND TOXIC MATERIALS

DFRC Aircraft Mishap Plan

Action Plan – Flight Operations
Directorate

G

Tab G Action Plan – Flight Operations Directorate (Code O)

Senior Flight Operations Directorate person available will accomplish the following steps:

- 1 Assign a Code O person to ensure following Action Plan is completed: _____
- 2 Alert Director's office and attend Initial meeting as per: **(Tab A)**
- 3 If after hours, implement **(Tab Q)**
- 4 If a Deployment mishap, implement **(Tab R)**
- 5 If Cross Country Incident, implement **(Tab S)**
- 6 Collect essential information **(Tab F)**
- 7 Notify Key personnel **(Tab E)**
- 8 Notify Code O personnel:

Flight Operations Secretary	3209
Chief of Maintenance	3210
Aircraft Maintenance Operations	2649
Aircraft maintenance Support Branch	3356 (this will alert crew chief)
Project Manager (TBD)	
Ground Safety/Contact	3210
Avionics Branch (Comm. Vehicle)	3644 / 2655
- 9 Assume overall command and coordination of activities at the mishap site, until such time as exclusive control and security of the site is assumed by an investigative body official. As necessary, appoint a Dryden On Scene Commander; assure that person is aware that the AFFTC On Scene Commander is in control for actions necessary to preserve life, reduce injuries, and limit loss of resources.
- 10 Ensure that required emergency measures are implemented, including establishment and maintenance of radio communications with the crash site. Coordinate with Aircraft Maintenance who will obtain communication vehicles. (If mishap site is close to improved highways consider using NASA 69 call: 2253, 2655, or 3488)
- 11 Ensure that security of the mishap site is established as soon as possible. Issue accident site passes to personnel as required.
- 12 Provide required air and ground transportation to the mishap site for personnel and equipment. If needed, contact USMC MAG-46 for possible Helicopter support:
 - Commander 661- 275-3439;
 - (Squadron Ops, HMM-769, 275-3465; HMM-764, 275-3460);
 - After hours cell phone 661-810-8364
- 13 Ensure that the following are informed concerning ongoing mishap site operations:

Director	3101
Safety and Mission Assurance Office	2500
Security	3256

Before use, check the Master List to verify that this is the current version.

DFRC On-Scene Commander

Name _____

- 1 Secure mishap scene. Capture perishable data. Do not disturb wreckage. Record all aircraft configurations and plot crash scene information.
-

Chief, Aircraft Maintenance Division

- 1 Establish a Code "O" Accident Command Post in the Maintenance Operations Office. Access to Command Post will be limited to designated key mishap personnel only. Normal aircraft maintenance operations will be moved to adjacent room.
 - 2 Determine what actions are required to recover/secure personnel and or equipment from mishap location.
 - 3 Ensure readiness of necessary personnel and equipment. Equipment needs to be on a periodic inspection (weekly, monthly, etc.) to implement aircraft recovery when requested.
 - 4 Secure and prepare to deliver all aircraft and engine records for the aircraft involved in the mishap to the Safety and Mission Assurance Office. Also quarantine all applicable servicing documents and forms, equipment.
 - 5 Issue cell phones and hand held radios, identify communication frequencies. Dispatch communications van when requested by DFRC on-scene commander.
 - 6 Ensure readiness to retrieve on-board recording tapes and fluid samples (fuel, oil, hydraulic, etc.) when requested.
 - 7 Supply information on toxic or hazardous material and approved apparel for the particular aircraft site.
 - 8 Dispatch maintenance personnel and recover team and equipment as required.
 - 9 Maintain constant communication with On Scene Commander and Flight Operations Director.
-

Chief, Life Support Section

- 1 Dispatch qualified life support systems personnel and necessary equipment to the crash site. Ensure all explosive charges, pyrotechnics, and similar devices are fired or safetied and removed from the site.
- 2 Determine pre-accident and post-accident operational status of life support systems and components.

DFRC Aircraft Mishap Plan

**Action Plan – Safety and Mission
Assurance**

H

Tab H Action Plan – Safety and Mission Assurance

1 Attend Initial meeting in Directors office **(Tab A)**

2 Notify the following, if not already done:

- | | |
|--|-------------|
| <input type="checkbox"/> • Medical | 3570 |
| <input type="checkbox"/> • Security | 3256 |
| <input type="checkbox"/> • Quality Assurance | 3862 / 3477 |
| <input type="checkbox"/> • Legal Office | 3997 |
| <input type="checkbox"/> • Photo Lab | 3350 |
| <input type="checkbox"/> • Transportation | 3320 |

3 Prepare NASA form 1627A.

4 After Initial Meeting in Directors office, report the mishap by phone to NASA Headquarters Safety and Mission Assurance Office

Call in this order:

During normal duty hours: (6:30 a.m. – 5:30 p.m.) Code QS

- | | |
|----------------------------|--------------|
| • John Mullin | 202-358-0589 |
| • Faith Chandler | 202-358-0411 |
| • Dr. Michael Stamatelatos | 202-358-1668 |

After HQ normal duty hours: 866-230-6272, HQ emergency center at MSFC

5 Fulfill other mishap and notification requirements, as required.

6 Monitor and assist in mishap investigation and proceedings.

7 Prepare and process required reports and make recommendations to the interim investigative board and DFRC management, as appropriate.

DFRC Aircraft Mishap Plan

Mishap Report Checklist

I

Tab I Mishap Report Checklist

Type of Report	When Required	Time Limits	References	Responsibility
Telephone report to NASA Head- quarters Safety <ul style="list-style-type: none"> During normal duty hours, Code QS 202-358-1668 or 202-358-0589. After HQ normal duty hours, 866-230-6272, HQ emergency center at MSFC 	Type A and B mishaps and those lesser mishaps with public interest or program impact	As soon as possible	NPR 8621.1G	Safety and Mission Assurance Office when directed by DFRC Director
Preliminary report to NASA Headquarters Safety	Type A and B mishaps and those lesser mishaps with public interest or program impact	2 hours	NPR 8621.1G	Mishap Investigation Board chair
Progress reports	All type A and any type B or incident for which a Mishap Investigation Board is convened.	Every 3 days or when new information warrants	NPR 8621.1G	Mishap Investigation Board chair
Formal mishap report	All type A and any type B or incident for which a Mishap Investigation Board is convened	To appointing official within 60 days of mishap. From appointing official to Director, Safety and Mission Assurance Officer within 75 days of mishap.	NPR 8621.1G	Mishap Investigation Board chair

Note: Types of mishaps are defined in **Tab B**.

DFRC Aircraft Mishap Plan

Security Procedures

J

Tab J Security Procedures

Mishap notification procedures - Security Dispatcher

Responsible for maintaining 24-hour coverage of the Dryden emergency response network. Coordinates radio and telephone communications to and from the mishap site.

- 1 After work hours, assume responsibility as the initial DFRC point of contact. Record the information requested in **Tab F**. Notify the Center Director.
- 2 Notify Edwards Command Post of the mishap at 661-277-3040.
- 3 Notify key personnel, call persons listed in **Tab E**.
- 4 Advise the DFRC Security Officer.

Procedures - DFRC Security Officer or representative

- 1 Dispatch patrols to mishap site.
- 2 Ensure that necessary medical, fire, and police units have been advised
- 3 Participate in meeting approximately one hour after notification of mishap. Meeting will be in the Executive Conference Room. Advise the Director as to the status of ongoing security operations at the mishap site.

Procedures at the mishap site - DFRC Security Officer or representative

- 1 Upon arrival at the mishap site, assume duties of the On-Scene Commander (**Tab K**) unless AFFTC or DFRC On-Scene Commander has assumed control.
- 2 Contact the cognizant law enforcement or security activity and ensure access of fire, medical, and DFRC officials. Ensure smoking is prohibited in the mishap area.
- 3 Establish 24-hour access control point. The site should be roped off and steps taken to establish and maintain radio/communications with the security dispatcher. Mishap access security includes traffic control, personnel access, provisions for an emergency vehicle lane, crowd control, and protection of evidence.
- 4 Refer news questions to the NASA Public Affairs Officer.
- 5 After access controls have been established, begin looking for debris and other items of interest to the interim investigation board. **Such items should be left in place and undisturbed** and the position marked for the mishap board.

DFRC Aircraft Mishap Plan

On-Scene Commander Guide

K

Tab K On-Scene Commander Guide

When the AFFTC Command Post, Control Tower, or Base Operations are notified of a flight vehicle mishap, the AFFTC search, rescue, fire and ambulance services take necessary action. The AFFTC On-Scene Commander shall be in control for actions necessary to preserve life, reduce injuries, and limit loss of property. The DFRC On-Scene Commander will perform these functions if the AFFTC On-Scene Commander is not present.

- 1 The Flight Operations Director or designee will be the DFRC On-Scene Commander if the mishap involves an aircraft in flight or controlled from a DFRC facility.
- 2 Ensure people are properly trained and equipped for the hazards resulting from the mishap. Keep non-essential people away from the wreckage.
- 3 Establish communications with DFRC main facility.
- 4 Preserve the accident site for investigative purposes. All debris should be left undisturbed until wreckage investigators, under the direction of the Mishap Board Chair, can conduct their investigation. The exact position and condition of every part of the aircraft can be very important in cause determination.
- 5 Identify and locate for interview any witnesses to the mishap. Get names, addresses, and telephone numbers of anyone who saw or heard the mishap or who knows someone who did.

DFRC Aircraft Mishap Plan

Controller/Senior Ops Rep. Action Plan
L

Tab L Controller/Senior Ops Rep. Action Plan

- 1 Notify AFFTC Control Tower by phone or by radio for
- 2 **CRASH / FIRE / MEDICAL / RESCUE** help.
 Phone 661-277-2121 / 2122 / 2108
 Radio UHF – 318.1
 VHF – 120.7
- 3 Notify Key personnel – (**Tab E**)
- 4 Serve as local communications coordinator, maintaining radio contact with flight vehicles and mobile ground stations for as long as may be necessary or useful, to relay pertinent information to concerned personnel.
- 5 Initiate the impounding of all Control Room data. Preserve all data and evidence related to the mishap, including taped radio and video transmissions. Ensure those in the response party are properly equipped for the hazards that may have resulted from the mishap.

DFRC Aircraft Mishap Plan

Medical Action Plan

M

Tab M Medical Action Plan

- 1 As required, dispatch medical personnel and equipment to the mishap site. Perform necessary post mishap physicals on aircrews and other rescued personnel.
- 2 Accompany the senior DFRC official when next-of-kin are notified of casualties.
- 3 Assure that necessary postmortem functions are provided and, as applicable, coordinate action with and assist the coroner and local authorities in the performance of their duties.
- 4 Impound health records, as necessary.

DFRC Aircraft Mishap Plan

Action Plan – Public Affairs Office P

Tab P Action Plan Public Affairs Office

- 1 Coordinate release of information concerning the mishap to news media, withhold names of any persons seriously injured or killed until next of kin have been notified.
- 2 Send a Public Affairs representative to the mishap scene to handle release of information. This representative reports to the NASA Flight Operations On-Scene Commander.
- 3 Provide public information assistance as required to the Interim Investigation Board.

DFRC Aircraft Mishap Plan

Action Plan – After Hours Mishap Q

Tab Q Action Plan – After Hours Mishap**SCIENCE AIRCRAFT MISSIONS**

Operations Monitor (designated on deployments)	<ol style="list-style-type: none"> 1 Collect initial information (Tab F) 2 If information source other than AFFTC Command Post, notify Command Post (661-277-3040) or local authorities if on deployment 3 Notify key personnel (Tab E) 4 Perform Controller/Senior Ops Rep. Action Plan (4) (Tab L) 5 Maintain contact with information source(s) as practical 6 Represent DFRC Management until further instructions received. 7 Participate in initial meeting as scheduled by DFRC Director
DFRC Senior Management	<ol style="list-style-type: none"> 1 Standby for further Management direction

RESEARCH AIRCRAFT MISSIONS

Controller/Senior Ops Rep	<ol style="list-style-type: none"> 1 Activate Action Plan (Tab L) 2 Notify key personnel (Tab E)
Staff listed in “Aircraft Mishap Immediate Action Guide”, page 2	<ol style="list-style-type: none"> 1 Proceed with assigned action at level commensurate with After Hours limitations, or, as otherwise instructed by the DFRC Director or his designee

ALL UNMONITORED “AFTER HOURS” MISSIONS (e.g., Cross Country)

Security Dispatcher	<ol style="list-style-type: none"> 1 Proceed with Tab J Action Plan (including Tabs E/F) 2 Maintain contact with information source if practical 3 Respond to instructions from DFRC Management
Security Officer	<ol style="list-style-type: none"> 1 Provide whatever security management support may be appropriate to security dispatcher 2 Attend initial meeting as may be scheduled by DFRC Director
Tab E Personnel	<ol style="list-style-type: none"> 1 Stand by for further Management direction

DFRC Aircraft Mishap Plan

Action Plan – Deployed Operations Mishap
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R

Tab R Action Plan – Deployment Operations

Deployment Senior**Operations Representative**

- 1 Serve as Mishap Response Coordinator
- 2 Immediately notify appropriate crash, rescue, and medical resources of the Mishap, if not already done by other sources
- 3 Maintain radio contact with other aircraft, mobile ground stations, etc., serving as information relay for as long as may be useful
- 4 Take other actions as may be specified by the Project "Deployment Plan"
- 5 Provide safeguards against further injury or property damage.
- 6 Report status to DFRC Operations Directorate and Senior Management as soon as immediate emergency is under control.

**Deployment Site Manager
(or Designee)**

- 1 Provide for required security for U.S. Govt. property
- 2 Impound all relevant data and all evidence associated with the Mishap, including voice tapes
- 3 Ensure that written eyewitness statements are obtained
- 4 Take other action as may be specified by the Project Deployment Plan

**Director of Flight Ops
located at DFRC**

- 1 Ensure voice communication path is maintained between DFRC and deployment site manager or his designee
-

A Deployment is defined as any Remote Flight Operation supported by a DFRC Ground Based Organization established at the remote site and is directed by a site Manager who is not a member of the Air Crew.

Cross Country Operations that RON at various destinations without the establishment of a formal Ground Based Site Manager are not considered "Deployments" for purposes of this Mishap Plan. **(See Tab S.)**

DFRC Aircraft Mishap Plan

Action Plan – Cross Country Operations

S

Tab S Action Plan – Cross Country Operations

- 1 Unlike Deployment Operations, which maintain a ground-based site management organization at the deployment site, Cross-Country Operations have no such point of contact for reporting to DFRC, and therefore, in the event of a mishap, it is likely that initial reports will reach DFRC from Civilian sources through the EAFB Command Post.
- 2 The Aircraft Mishap Immediate Action Guide (page 2), or **Tab Q** (if after hours), provides the appropriate Dryden responses.
- 3 NO NEW DFRC ACTION IS GENERATED BY THIS TAB S. IT IS PRIMARILY AN INFORMATION PAGE TO CLARIFY THE DISTINCTION BETWEEN “CROSS COUNTRY OPERATIONS” AND “DEPLOYMENT OPERATIONS”.

DFRC Aircraft Mishap Plan

Crash Site Management Plan	T
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Tab T Crash Site Management Plan

Purpose

To provide a plan for the managing of an aircraft crash site, to be placed in operation as soon as possible following the mishap and the completion of any ensuing rescue or fire control activity.

Background

Modern aircraft containing sophisticated systems can present unique hazards to personnel engaged in mishap response activities. For example, hydrazine is used to fuel emergency power generating machinery in a number of Dryden's aircraft. This chemical is extremely toxic and requires careful handling and wearing of protective clothing and respiratory equipment by those exposed to its vapors.

Modern technology has also introduced composite structures, the most notable involving the use of carbon fibers, which are harmless in their intended "as built" form but which present significant respiratory risk as minute free floating fibers following an aircraft mishap, especially one in which fire has occurred.

It therefore follows, that the DFRC Safety, Health, and Environmental Office will play a significant role in support of crash site operations.

Key Personnel In Crash Site Operations

- 1 On-Scene Commander - the Ultimate authority at the crash site (Initially a USAF Officer, subsequently replaced by a DFRC person at a mutually agreed upon time).
- 2 2Site Safety Officer - The ranking authority dealing with Safety, Health, and Environmental issues at the crash site (Initially a USAF Officer, subsequently replaced by a DFRC person appointed by the Chief of Code SH).
- 3 Dryden Industrial Hygienist (IH) - Supports Dryden Site Safety Officer (Appointed by the Chief of Code SH).
- 4 Security Officer - Protects the crash site from unauthorized intrusion and safeguards any classified material (Initially a USAF Officer replaced by a Dryden Security specialist at a mutually agreed upon time).
- 5 HAZMAT Team - A team of technicians trained and equipped to handle and dispose of hazardous materials (Could be provided by USAF or Dryden).
- 6 Technician Team - A team which includes a crew chief and other technicians who have been fitted with, and are equipped with, respirators and other protective clothing as may be specified by the IH for the mishap at hand.
- 7 Photo Team - Still photos and video (self explanatory).
- 8 Interim Mishap Investigation Board - Chairman and Board Members (See **Tab A** of the Aircraft Mishap Response Procedure DCP-S-001).

Before use, check the Master List to verify that this is the current version.

Scope of This Plan

When all rescue and/or fire-fighting activity has ended, this plan is to be placed in operations, and will continue in effect until the final disposal of the debris. For convenience, the following time segments are hereby established:

- a. Site Safeing
- b. Site Preservation
- c. Mishap Investigation

Site Safeing

- 1 Appointment and deployment of the On-Scene Commander and Security Officer will be accomplished, as promptly as practical. As has been noted earlier, these will initially be USAF personnel, to be replaced by Dryden appointees. (Selected at the DFRC Director Initial Meeting, Ref **Tab A.**).

NOTE: Exact sequencing of the work involved in the following items 2, 3, 4, and 5 must be at the discretion of the On-Scene Commander in coordination with the Site Safety Officer and other key personnel. Debris locations, wind conditions, ordnance ignition risk, and the presence of hazardous materials are factors to be considered.

- 2 In the event that the mishap has resulted in fatalities, the AFFTC and DFRC Flight Surgeon's Offices will be notified as soon as possible. Removal of remains will be under the AFFTC Flight Surgeon's direction. Safety considerations may dictate a priority for such removal, in which case the On-Scene Commander will coordinate with the medical authorities and DFRC Code SH. AFFTC will notify the Coroner's Office of that county in which the mishap occurred, per existing agreements (Ref MOU #MU94-02-03), and that coroner will assume custody of the remains (or may waive such option in favor of AFFTC custody).
- 3 Following an initial assessment by the On-Scene-Commander the following actions may be directed:
 - a. Deployment of EOD technicians to deactivate and/or remove any live ordnance.
 - b. Deployment of the HAZMAT team to neutralize or remove any Hydrazine or other hazardous materials and assess possible Biohazards.
 - c. Encapsulation of hazardous composite structure fibers, as required.
 - d. During these activities, any fuel accumulations will be diluted by the USAF fire department.
 - e. Obtain names, addresses, and telephone numbers of any eyewitnesses to the mishap.
- 4 The crew chief and A/C technician team will stand by for action as may be specific to the situation. One such action item is to disconnect aircraft batteries if they have not been destroyed in the mishap, and if major disturbance of the wreckage is not required. If this is not practical, the On-Scene Commander may direct alternate action.

NOTE: Battery systems seldom remain "alive" in a demolished aircraft. However, in lesser mishaps (such as belly landing) the battery buss may remain intact, and battery disconnect should be accomplished.

- 5 Photography from a safe distance can be permitted, but request for early access to hazardous areas must be deferred until safeing is completed. A widespread debris field allows for greater latitude in this regard, but the On-Scene Commander has the final word. During the site safeing operation, every effort will be made to keep the wreckage undisturbed.

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- 6 Personnel performing site safeing activities will be equipped as directed by the Site Safety Officer.
- 7 When in the judgment of the On-Scene Commander, the actions required in items 2, 3, and 4 above have been satisfactorily completed; the crash site will be declared "safe".

NOTE: "Site Safe" is a relative term. It is likely that ongoing update of the "safe" condition will be required especially when composite structure is disturbed by the follow on activities. Dryden Code SH will provide recommendations re this issue.

Site Preservation

- 1 An indeterminate period of time will separate the site safeing operation and the start of formal investigative activities. During this period the crash site is to be maintained as undisturbed as possible except for the following actions:
 - a. Recover any classified data or equipment and deliver to DFRC Security for disposition.
 - b. Recover perishable data (tapes, film, etc.) and deliver to Flight Safety Office.
 - c. Recover fuel and hydraulic fluid samples and deliver to Flight Safety Office.
 - d. Take photographs and video of the crash site from points "around the clock" as well as close ups of significant wreckage.
 - e. Map the site locating any significant items, or damage (if any) to ground features.

NOTE: Items recovered from a crash site may be contaminated and require special handling from the time of recovery through the Mishap investigation. Code SH Industrial Hygienist personnel will determine appropriate storage conditions to ensure that contamination does not spread. Code SH Industrial Hygienist personnel will also specify appropriate level of personal protective equipment (PPE) required by personnel handling those contaminated items

- 2 The above activity will take place under the direction of the On-Scene Commander or the Chairman of an Interim Mishap Investigation Board when one is appointed. Supporting personnel will include the aircraft Crew Chief or such designee as may be selected by OM supervision (must be familiar with the aircraft) and a team of mechanics and avionics techs as may be deemed necessary by appropriate supervision. Personnel from the DFRC Photo Lab will also be required. The overview of the IH or his representative is required to ensure compliance with the safety precautions.
- 3 Those personnel from the above Site Preservation Team who are likely to handle broken or burnt composite material should wear previously fitted respirators and such additional protective clothing as may be prescribed by the Site Safety Officer or Dryden Industrial Hygienist.

NOTE: Supervisors of those organizations, which normally provide the Site safeing and site preservation teams, must maintain a cadre of appropriate personnel who, on an annual basis, are medically cleared, trained in the use of respirators and pass a respirator fit test conducted by Code SH Industrial Hygienist personnel. Project managers who serve as "hosts" for contractor operations (e.g., RPA and UAV Projects) will ensure that contract personnel meet these requirements before flight operations begin.

Mishap Investigation

- 1 Mishap Investigation overlaps the site preservation stage, with the participation of the Interim Investigating Board. At some mutually agreed upon time, the On-Scene Commander will turn the site over to the Board Chairman who will pick up the mapping, photographing, and data gathering operations, and see them through to completion.
- 2 When to remove the wreckage, and cleanup the crash site, will be determined by the "permanent" Mishap Investigating Board, which will transition into full control of the mishap investigation, at which time the Interim Board will be dissolved.
- 3 Removal of wreckage and cleanup of the crash site will be accomplished using the best available means, under the direction of Code SH, to ensure compliance with safety and environmental requirements. Such requirements also apply to storage and final disposal of hazardous wreckage.

Global Considerations

The foregoing plan is focused on mishaps that occur within relatively easy reach of Dryden and AFFTC resources. This covers the great majority of flights conducted by Dryden, and is further supported by our mishap experience over the years.

However, as remote as the probability might seem, it must be recognized that Dryden aircraft operate on a truly global scale and mishaps can occur almost anywhere.

Reliance on regional fire departments, police departments, paramedics and other support agencies will be required, in the event of a distant mishap. In addition, the support of the closest military facility, especially an Air Force Base will be sought.

Dryden will organize and dispatch a team to the mishap location, to assure that proper safeing of the site is accomplished and to preserve the wreckage as much as practical for a mishap investigation team.

This plan will provide the essential guidance for managing a crash site anywhere in the world with a bit of tailoring to suit the particular situation (and recognition that agencies other than AFFTC) may be our major support at remote locations. The safety considerations contained in the plan are applicable to any mishap, and must be followed regardless of the geographical location.

Document History Log

This page is for informational purposes and does not have to be retained with the document.

Status Change	Document Revision	Effective Date	Page	Description of Change
Baseline		12-14-98		
Revision	A	4-19-99	All	Updated Tab E and deleted excess page numbers.
Revision	B	2-7-00	All	Added signature block on cover page, updated Tab G, and misc. changes throughout document.
Revision	C		16	Removed personal phone numbers from page 16 and added Tab T, Crash Site Management Plan.
Revision	D	6-23-03	All	Updated phone numbers through document.
Revision	E	11-05-03	21 24 26	<ul style="list-style-type: none"> Changed name of Flight Operations Deputy Director to Flight Operations Secretary. Changed phone number to 3209. Updated Aircraft Maintenance Operations phone number. Updated Avionics Branch (Comm. Vehicle) phone number. Updated phone numbers in listing 10. Updated phone numbers in listing 12 and added Duty NCO listing and phone. Updated Code QS normal duty hours phone number. First block, updated NASA HQ Safety phone number.
Admin Change	E	01/30/04	All	Change NPG to NPR per HQ direction of 12/05/03
Revision	F	4-13-04	24	Update phone numbers for Tab H 4, normal duty hours, Code SQ.
Admin Change	F	9-21-04	21, 24, 32	Updated phone numbers.
Admin Change	F	5-4-05	6, 21, 24,	Updated phone numbers.
Admin Change	F	8-2-05	21, 24	<ul style="list-style-type: none"> Updated phone numbers Removed reference to Code Y. Format changes to improve reading ease and consistency.
Admin Change	F	3-29-06	20, 23, 31	<ul style="list-style-type: none"> Updated phone numbers Deleted Duty NCO listing, page 20, item 12 Deleted Wilson Harkins, page 23, item 4 Reordered phone number list, page 31, item 2
Admin Change	F	4-11-06	47	Corrected Document History Log.

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